

Submittal Description: Yoke Pins, Closed Sewage Sockets, TB Jaws, Hardware

Submittal No: 5

Spec Section: 05150

	Routing	Sent	Received
OWNER: City of Lake Oswego	Contractor/CM	1/9/09	
PROJECT: Lake Oswego Interceptor Sewer	CM/Engineer		1/9/09
CONTRACTOR:	Engineer/CM		
	CM/Contractor		

We are sending you:  Attached  Product data for information only  Submittals for review and comment  
 Under separate cover via \_\_\_\_\_

Remarks: \_\_\_\_\_

Item	Copies	Date	Section No.	Description	Review action <sup>1</sup>	Reviewer initials	Review comments attached
1	1	1/9/09	05150	5/8" Open Sewage Socket	NET	NEB	
1	1		05150	3/4" Open Sewage Socket	NET	NEB	
1	1		05150	5/8" Yoke Pin (1.3/16" Ø)	NET	NEB	
1	1		05150	1" Open Sewage Socket	NET	NEB	
1	1		05150	1 1/8" Open Sewage Socket	NET	NEB	
1	1		05150	1" TB Jaw	NET	NEB	
1	1		05150	1 1/4" TB Jaw	NET	NEB	
1	1		05150	1/2" TB Jaw	NET	NEB	

<sup>1</sup>Note: NET = No exceptions taken; MCN = Make corrections noted; A&R = Amend and resubmit; R = Rejected  
 Attach additional sheets if necessary.

Contractor: Certify either A or B

- A. We have verified that the material or equipment contained in this submittal meets all the requirements, including coordination with all related work, specified (no exceptions).
- B. We have verified that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

No.	Deviation

Certified by: \_\_\_\_\_

Contractor's Signature

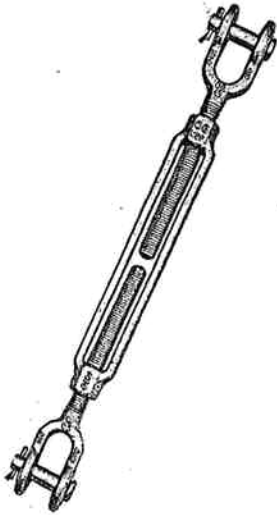
<sup>1</sup> See paragraph 01300-4.0 A, Transmittal Procedure.

# Jaw & Jaw Turnbuckles



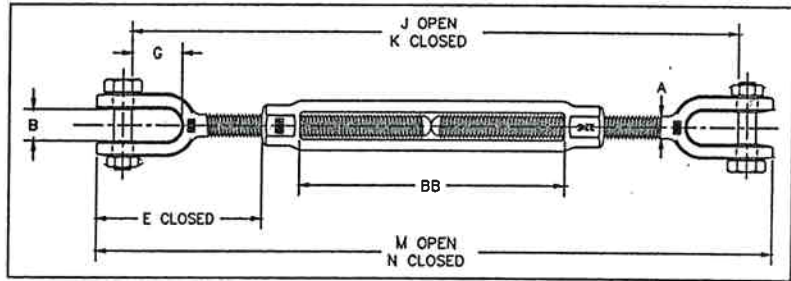
**Fatigue Rated**

**HG-228**



Meets the performance requirements of Federal Specifications FF-T-791b, Type 1, Form 1 - CLASS 7, and ASTM F-1145, except for those provisions required of the contractor. For additional information, see page 361.

- End fittings are Quenched and Tempered, bodies heat treated by normalizing.
- Hot Dip galvanized steel.
- TURNBUCKLES RECOMMENDED FOR STRAIGHT OR IN-LINE PULL ONLY.
- Forged jaw ends are fitted with bolts and nuts for 1/4" through 5/8", and pins and cotters on 3/4" through 2-3/4" sizes.
- Modified UNJ thread on end fittings for improved fatigue properties.
- Body has UNC threads.
- Crosby products meet or exceed all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, Crosby products meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- Lock Nuts available for all sizes (see page 164).
- Comprehensive end fitting data provided on page 162.
- Fatigue Rated.



**HG-228**

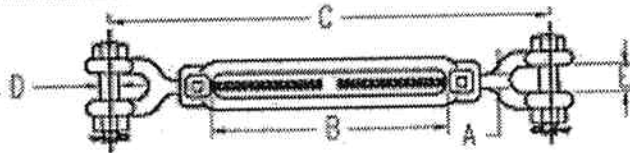
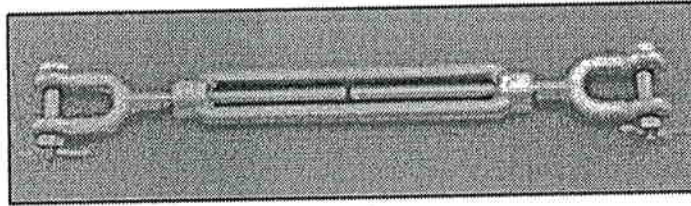
**Jaw & Jaw**

Thread Dia. & Take Up (in.)	HG-228 Stock No.	Working Load Limit (lbs.)	Weight Each (lbs.)	Dimensions (in.)									
				A	B	E Closed	G	J Open	K Closed	M Open	N Closed	BB	
1/4 x 4	1032493	500	.36	.25	.45	1.58	.62	10.90	6.90	11.90	7.90	4.00	
5/16 x 4-1/2	1032518	800	.52	.31	.50	1.98	.87	12.36	8.36	13.90	9.40	4.50	
3/8 x 6	1032536	1200	.81	.38	.54	2.12	.87	16.14	10.14	17.38	11.38	6.00	
1/2 x 6	1032554	2200	1.56	.50	.65	2.75	1.06	18.50	11.50	20.00	13.00	6.00	
1/2 x 9	1032572	2200	1.74	.50	.65	2.75	1.06	24.50	14.50	26.00	16.00	9.00	
1/2 x 12	1032590	2200	2.40	.50	.65	2.75	1.06	30.50	17.50	32.00	19.00	12.00	
5/8 x 6	1032616	3500	2.72	.63	.79	3.50	1.31	20.05	12.80	22.13	14.88	6.00	
5/8 x 9	1032634	3500	3.43	.63	.79	3.50	1.31	26.05	15.80	28.13	17.88	9.00	
5/8 x 12	1032652	3500	3.91	.63	.79	3.50	1.31	32.05	18.80	34.13	20.88	12.00	
3/4 x 6	1032670	5200	4.11	.75	.94	4.18	1.50	21.50	14.00	24.10	16.60	6.00	
3/4 x 9	1032698	5200	5.46	.75	.94	4.18	1.50	27.50	17.00	30.10	19.60	9.00	
3/4 x 12	1032714	5200	6.56	.75	.94	4.18	1.50	33.50	20.00	36.10	22.60	12.00	
3/4 x 18	1032732	5200	8.03	.75	.94	4.18	1.50	45.50	26.00	48.10	28.60	18.00	
7/8 x 12	1032750	7200	8.17	.88	1.13	4.85	1.75	35.11	21.36	38.07	24.32	12.00	
7/8 x 18	1032778	7200	10.78	.88	1.13	4.85	1.75	47.11	27.36	50.07	30.32	18.00	
1 x 6	1032796	10000	10.18	1.00	1.34	5.53	2.06	24.72	16.72	28.06	20.06	6.00	
1 x 12	1032812	10000	13.14	1.00	1.34	5.53	2.06	36.72	22.72	40.06	26.06	12.00	
1 x 18	1032830	10000	15.14	1.00	1.34	5.53	2.06	48.72	28.72	52.06	32.06	18.00	
1 x 24	1032858	10000	18.08	1.00	1.34	5.53	2.06	60.72	34.72	64.06	38.06	24.00	
1-1/4 x 12	1032876	15200	20.59	1.25	1.75	7.21	2.81	39.84	25.34	44.04	29.54	12.00	
1-1/4 x 18	1032894	15200	24.68	1.25	1.75	7.21	2.81	51.84	31.34	56.04	35.54	18.00	
1-1/4 x 24	1032910	15200	28.20	1.25	1.75	7.21	2.81	63.84	37.34	68.04	41.54	24.00	
1-1/2 x 12	1032938	21400	30.69	1.50	2.06	7.88	2.81	41.50	26.50	46.50	31.50	12.00	
1-1/2 x 18	1032956	21400	36.75	1.50	2.06	7.88	2.81	53.50	32.50	58.50	37.50	18.00	
1-1/2 x 24	1032974	21400	41.60	1.50	2.06	7.88	2.81	65.50	38.50	70.50	43.50	24.00	
1-3/4 x 18	1033018	28000	54.00	1.75	2.60	9.40	3.38	53.38	35.38	59.18	41.18	18.00	
1-3/4 x 24	1033036	28000	63.36	1.75	2.60	9.40	3.38	65.38	41.38	71.18	47.18	24.00	
2 x 24	1033054	37000	94.25	2.00	2.62	11.86	3.69	69.54	45.54	76.72	52.72	24.00	
2-1/2 x 24	1033072	60000	165.00	2.50	3.01	13.56	4.44	72.98	48.98	82.18	58.18	24.00	
2-3/4 x 24	1033090	75000	198.00	2.75	3.63	15.22	4.19	74.75	50.75	85.50	61.50	24.00	

\* Proof Load is 2.5 times the Working Load Limit. Ultimate Load is 5 times the Working Load Limit.

## TURNBUCKLE JAW & JAW

**316-NM STAINLESS STEEL**



ITEM	A	B	C	D	E	WLL	WT
	(size)	(adjustment)				(lb)	(lb)
S0108-JJ07	1/4"	4.00"	7.75"	0.25"	0.44"	500	0.45
S0108-JJ08	5/16"	4.50"	9.00"	0.25"	0.50"	800	0.65
S0108-JJ10	3/8"	6.00"	10.63"	0.31"	0.56"	1,200	0.90
S0108-JJ13	1/2"	6.00"	12.00"	0.38"	0.63"	2,200	1.60
S0108-JJ16	5/8"	6.00"	13.50"	0.50"	0.75"	3,500	3.05
S0108-JJ20	3/4"	6.00"	15.00"	0.63"	1.00"	5,200	4.25
S0108-JJ25	1"	6.00"	18.00"	0.88"	1.25"	8,000	10.59
S0108-JJ25-1	1"	12.00"	24.00"	0.88"	1.25"	8,000	12.66
S0108-JJ32-1	1-1/4"	12.00"	26.63"	1.13"	1.88"	12,500	22.32
S0108-JJ38-1	1-1/2"	12.25"	28.95"	1.36"	2.19"	17,000	31.04

**NOTE: MEETS WLL AND DIMENSIONS OF ASTM SPECIFICATION F1145-92 TYPE 1, CLASS G. BODIES ONLY ON P. 16; S0106-BD SERIES. NUTS ARE AVAILABLE (PAGE 79), BUT SOLD SEPERATLEY.**